

DIENTSBIER, Emil (Praha 1, U nemocnice 2.)

Provocative tests as a means to ascertaining the pathogenesis of
glaucoma. Cesk. ofth. 14 no.1:6-18 Feb 58.

1. I. oční klinika KU v Praze, přednosta prof. Dr. Emil Dienstbier.
(GLAUCOMA, etiol. & pathogen.
provocative tests in determ. of pathogen. (Gz))

EXCERPTA MEDICA Sec 12 Vol 13/6 Ophthalmology June 59

880. CHOLINESTERASE ACTIVITY OF RED BLOOD CELLS IN PATIENTS SUFFERING FROM GLAUCOMA - Aktivita cholinesterasy červených krvinek u nemocných glaukomem - Dienstbier E. I. Oční Klin. KU, Praha - ČSL. OFTHAL. 1958, 14/5 (321-326) Tables 2

According to current opinions, only true cholinesterase has a relation to the vegetative nervous system. The author examined the activity of cholinesterase from erythrocytes by McDonald's method, as reported by Fleisher and Pop, in 50 patients suffering from various types of primary glaucoma and in 50 non-glaucomatous controls. No statistically significant difference in mean values between the 2 groups was noted. There is, therefore, no direct causal relationship between the activity of the cholinesterase of erythrocytes and glaucoma. These results concerning the activity of the cholinesterase of erythrocytes permit no conclusion about the activity of cholinesterase in other tissues.

Zahn - Prague

*I. Oční klinika Kov Praze, předposlední -
prof. MUDr. Emil Dienstbier*

DIENSTBIER, Emil

~~Glaucoma~~ as a social problem. Sborn. lek. 61 no.7/8:185-193 July 1959

I. I. oční klinika fakulty všeobecného lékařství University Karlovy
v Praze, přednosta prof. MUDr. Emil Dienstbier.
(GLAUCOMA, soc.)

Dienstbier, Emil; Halik, Josef

Fluorophotometric determination of adrenalin and noradrenalin in serum.
Gas. lek. cesk. 98 no.1:16-20 3 Jan 59.

I. I. oční klinika Karlovy university v Praze, přednosta prof. dr. E.
Dienstbier, E. D., Praha 2, U nemocnice 2.

(EPINEPHRINE, in blood

determ., fluorophotometric method (Cz))

(ARTERENOL, in blood

same)

DIENSTBIER, Emil

Early diagnosis of glaucoma. Cesk. ofth. 16 no.3/4:167-180 My '60

1.1ocni klinika KU v Praze, prednosta prof. dr. Emil Dienstbier.
(GLAUCOMA diag.)

DIENSTBIER, Emil; BALIK, Josef; FISCHER, Ota

Determination of the lipoproteins in the blood serum of patients with glaucoma. Cesk. ofth. 17 no.3:205-213 My '61.

1. I oční klinika fakulty všeobecného lékařství KU v Praze, přednosta prof. dr. Emil Dienstbier Matematický ústav CSAV, přednosta akademik prof. dr. J. Novak.

(LIPOPROTEINS blood) (GLAUCOMA blood) "

DIENSTBIER, E.; BALIK, J.

Some interesting perimetric findings in glaucoma. Cesk. oftal.
20 no.4:302-307 J1'64

1. I. oční klinika fakulty všeobecného lékařství KU [Karlovy
university] v Praze; přednosta: prof. dr. E. Dienstbier, DrSc.

DIENSTBIER, E.

Pathogenesis of primary glaucoma. Cesk. oftal. 20 no.6:
403-411 N '64.

Dissociation between anatomico-clinical and functional
find ings in glaucoma. Ibid.:412-416

1. I očni klinika fakulty vseobecného lékařství Karlovy
University v Praze, (prednosta prof. dr. E. Dienstbier, DrSc).

DIENSTBIER, E.; BALIK, J.

Duration of the satisfactory state of the eye in treated primary glaucoma. *Cesk. oft.* 1.20 no.6:417-421 N 1.

Effect of total treatment on changes in the visual fields in glaucoma. *Ibid.*:422-427

1. I oční klinika fakulty všeobecného lékařství Karlovy university v Praze, (prednosta prof. F. Dienstbier, DrSc).

~~DIENSTBLER, E.~~; BALIK, J.; DUCHON, J.; Technická spolupráce: LUDOVA, Z.;
MATOUS, B.

Catecholamine derivatives in the urine of patients with
glaucoma. Cesk. oftal. 20 no. 6: 460-465 N '64.

I. Oční klinika (prednosta prof. dr. Dienstbier, DrSc.),
II. Chemický ústav (prednosta prof. dr. MVDr. J. Sula)
Fakulty všeobecného lékařství Karlovy university v Praze.

DIENSTBIER, E.; BALIK, J.; KAFKA, H.

Elastic properties of the arteries of the extremities in patients with glaucoma in relation to the biochemistry of lipids and the clinical course. Sborn. lek. 66 no.8:234-239 Ag'64

1. I. oční klinika fakulty všeobecného lékařství University Karlovy v Praze (prednosta: prof. dr. E. Dienstbier, DrSc) a Kardiologické oddělení fakultní polikliniky (vedoucí: doc. dr. H. Kafka, CSc.)

DIENSTBIER, E.

Current concepts on the clinical picture of primary glaucoma.
Cas. lek. cesk. 103 no. 30 121-129 27 JI '64

1. I očni klinika fakulty vseobecneho KU [Karlov university]
v Praze; prednosta: prof. dr. E. Dienstbier.

DIENSTBIER, E.

Current concepts on the treatment of primary glaucoma. Cas. lek.
cesk. 104 no.2: 1-14 15 Ja '65

1. I očni klinika fakulty vseobecneho lekarstvi Karlovy University
v Praze (prednosta prof. dr. E. Dienstbier, DrSc.)

DIENSTBIER, E., prof. dr., DrSc.

Acute keratoconus with particular reference to its occurrence
in mongolism. *Cesk. oftal.* 21 no.3:200-206 My '65

I. I. očni klinika fakulty vseobecneho lekarstvi Karlovy Univer-
sity v Praze (prednosta: prof. dr. E. Dienstbier, DrSc.).

ENGLIS, M.; DIENSTBIER, M.

"Principles and results of radiobiology" by Hedi Fritz-Niggli.
Reviewed by M.Englis and Z.Dienstbier. Jaderna energie 6
no.6:216 Je '60.

DIENSTBIESZ.

V Preparation of thromboplastin solutions for Quick's test. (2)
Z. Dienstbier, J. Libánský, and B. Polák (I. Intern. klin.,
Prague). *Časopis Lékařů Českých* 89, 1063-8(1950).
Various factors influencing the activity of thromboplastin (I)
solns. have been studied. By the modification of Quick's
method for prepn. of I solns., omitting the centrifugation
and filtration of heated I suspensions, solns. have been
prepd. which were stable for several weeks. A. Z.

LIBANSKY, J.; DIENSTBIER Z.; POLAK, B.

~~CONFIDENTIAL~~
Method of prothrombin time test in the control of pelentan therapy.
Prakt. lek., Praha 31 no.16:353-355 20 Aug 1951. (CIML 21:1)

1. Of the First Internal Clinic (Head — Prof. M. Netousek, M.D.)
of Charles University, Prague.

LIBANSKY, J., Doc. Dr; DIENSTBIER, Z., Dr; POLAK, B., Dr

Hazards in pelentan therapy. Cas.lek.cesk. 91 no,45-46:1319-1328
14 Nov 52.

1. Z I. interni kliniky a z interniho oddeleni Fakultniho zdrav.
strediska.

(COUMARIN, derivatives,
ethly bisceumacetate, hazards)

HERMANSKY, Frantiske, MUDr; ~~DIENSTBIER~~, Zdenek, MUDr; HERMANSKA, Zorka,
MUDr; MALY, Vladimir, Mgnat.

Effect of barbiturate narcosis on response of leukocytes to various
stress stimuli in rats. Cas.lek.cesk. 91 no.50:1491-1499 12 Dec 52.

1. Z prvnj kliniky chorob vnitrnich, prednosta prof. Dr. M.Netousek,
a z vnitrnho oddeleni SOLOU v Krci, prednosta Dr J.Trojan. Stati-
sticke zpracovani: Mgnat Vladimir Maly. Z ustavu pro organisaci
zdravotnictvi, prednosta prof. Dr. V.Prosek.

(LEUKOCYTE COUNT,

eff. of barbiturate anesth. on response to stimuli in
rats)

(BARBITURATES, anesthesia and analgesia,

eff. on leukocyte response to stimuli in rats)

(ANESTHESIA, effects,

barbiturate anesth., on leukocyte response to stimuli
in rats)

HERMANSKY, F.;DIENSTBIER, Z.;PUDLAK, P.

~~Coagulating activity of blood serum and problem of anticogulant therapy.~~
Coagulating activity of blood serum and problem of anticogulant therapy.
Gas. lek. cesk. 92 no.16:419-426 17 Apr 1953. (CLML 24:4)

1. Of the First Internal Clinic (Head--Prof. M. Netousek, M. D.) of
Charles University, Prague.

DIENSTBIER, Z., and others

"The influence of penicillin on blood coagulation with reference to the principle of the "protected clot." p. 829." (CASOPIS LEKARU CESKYCH, Vol. 92, no. 30/31, July 1953, Praha, Czechoslovakia.)

SO: East European, L. C. Vol. 2, No. 12, Dec. 1953

DIENSTBIER Z.

DIENSTBIER Z. *Nase skusenosti s protrombinovou konzumacni testem krevnych stavu. Our experiences with the prothrombin consumption test in haemorrhagic states. CAS. LEK. CES. 1953, 32/33-34 (330-336) Graphs 1 Tables 2 Illus. 1 (5354)

The prothrombin consumption test was performed 100X in 123 subjects by the Soulier seconds method (Revue d'Heimatol. 1948, 3, 302). Out of 27 haemophiliacs, normal prothrombin consumption was found only twice in venous blood and 6X in the capillary blood. In all the others there was a very marked decrease in the prothrombin consumption. A lower prothrombin consumption was observed also in 5 out of 6 mothers of haemophiliacs and in primary non-splenectomized thrombocytopenia (in venous blood only). Splenectomized subjects had a normal prothrombin consumption even when the platelet count remained low. Also patients suffering from secondary thrombocytopenia (10 cases), 3 members of a family with Willebrand-Jurgens thrombopathy, and 1 patient with suspected thrombocytoclastia had a low prothrombin consumption. On the other hand, a normal prothrombin consumption was found in myelogenous leukaemia with thrombocytopenia, in anaphylactoid purpura, in various liver diseases and unclassified moderate haemorrhagic diatheses. Compared with other techniques, the Soulier method was found useful for detecting disturbances in thromboplastin formation. Fejfer-Prague

SO: Excerpta Medica, Vol. 8, No. 8, Sect. VI, August, 1954

CZECHOSLOVAKIA

DIENSTEINER, E., Docent MD., Cas .

Chair of Medical Physics and Nuclear Medicine FVL UK
(Katedra lékařské fyziky a nukleární medicíny FVL
UK), Prague

Brno, Vnitřní lékařství, No 6, 1963, pp 527-531

"Radioisotopes in Medical Diagnostics."

DIENSTBIER, Zd.; POSFISIL, J.

Experimental contribution to the prognostic importance of the peripheral blood changes in the course of acute radiation injury. Sborn. lek. 65 no.1:1-7 Ja '63.

1. Biofyzikalni ustav fakulty vseobecneho lekarstvi University Karlovy v Praze Veterinarni vyzkumne stredisko v Praze.

(RADIATION INJURY EXPERIMENTAL) (BLOOD CELL COUNT)
(LEUKOCYTE COUNT) (ERYTHROCYTE COUNT) (HEMATOCRIT)

Dienstbier, Zdenek

CZECH

V Changes in blood coagulability in vivo following intravenous injection of thrombokinase and an attempt to block these effects. Zdenek Dienstbier and Jan Forst (I. klin. chorob vnitřních, Prague). *Časopis Lékařů Českých* 93, NO. 9 (FEB) 217-22(1954).—White rats were injected intravenously with a suspension of brain thromboplastin and an 80% mortality was observed, due to thromboembolisms. Prolongation of the clotting time was caused, probably, by a consumption of blood fibrinogen. Application of heparin prior to the injection of thromboplastin prevented death in all cases. The mortality rate was unaffected by dial anesthesia or by an application of procaine prior to the thromboplastin injections. When the thromboplastin suspension was prepared by a direct dilution of the dry substance in 1% procaine, the mortality rate fell from 80 to 36%. Procaine causes prolongation of prothrombin time even *in vitro*. I. M. H.

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DIENSTBIER, Zdenek
HERMANSKY, Frantisek, MUDr; DIENSTBIER, Zdenek, MUDr; PUDLAK, Pavel, MUDr;
MALY, Vladimir, MgMat, statistické zpracovani.

Effect of barbiturate anesthesia on eosinophils following various
types of stress in rats. Cas.lek.cesk. 93 no.24:641-645 11 June 54.

1. Z Prvni kliniky chorob vnitrnich, prednosta prof. Dr M.Hetousek
(Vor Hermansky, Dienstbier, Pudlak) 2. % Ustavu pro organizaci
zdravotnictvi, prednosta prof. Dr V.Prosek. (for Maly)

(STRESS, experimental,

eff. of barbiturate anesth. on eosinophil count in white
rats after stress)

(BARBITURATES, anesthesia and analgesia,

eff. on eosinophil count after stress in white rats)

(EOSINOPHIL COUNT,

eff. of barbiturate anesth. on eosinophils after stress
in white rats)

(ANESTHESIA,

barbiturate, eff. on eosinophil count after stress in
white rats)

DIENSTBIER, ZDENEK,

HERMANSKY, Frantisek, MUDr; PUDLAK, Pavel, MUDr; DIENSTBIER, Zdenek, MUDr

Effect of urethane anesthesia on leukocyte response following
glucose stress. Cas. lek. cesk. 93 no.36-37:983-988 10 Sept 54.

1. Z I. kliniky chorob vnutrnych, prednosta prof. Dr. Milos Netousek. Statistike spracovani: MgMat Vladimir Maly. 2.
- Z ustavu pro organisaci zdravotnictvi, prednosta prof. Dr. Prosek.
 - (URETHANE, effects,
on leukocyte count response to glucose stress)
 - (LEUKOCYTE COUNT,
eff. of urethane on leukocyte response to glucose stress)
 - (STRESS, experimental,
eff. of urethane on leukocyte response to glucose stress)

DIENSTBIER, ZDENĚK

~~Some possibilities of blocking the effect of ionizing radiations. Zdeněk Dienstbier (I. klin. chorob vnitřních, Prague) *Časopis lékařů českých* 93, 988-93(1954).
A review concerning biophys., biochem., and pharmacol. aspects, with 94 text references. Ivo M. Hais~~

RMZ LSH

Dienstbier, Zdenek; Camsky, Jiri; Maly, Vladimir, statistike spracovani

Mechanism of early modification of leukocyte count following lethal dose of roentgen rays. II. Effect of anesthesia and of mercaptoethylamine; neurohumoral regulation of white blood picture. Ces. lek. cesk. 93 no.50:1364-1367 10 Dec 54.

1. Z prini kliniky chorob vnitrnich, prednosta prof. Dr M.Netousek a z Ustavu pro leteckou fyziologii, prednosta prof. Dr D.Capek. (for Dienstbier, Camsky) 2.ZUstavu pro organizaci zdravotnictvi, prednosta prof. Dr V.Prosek (for Maly)

(LEUKOCYTE COUNT, effect of radiation on, x-ray, lethal dose, eff. of anesth. & mercaptoethylamine in rabbits)

(ROENTGEN RAYS, effects, on leukocyte count, lethal dose, eff. of anesth. & mercaptoethylamine in rabbits)

(ANESTHESIA, effects, on leukocyte count after lethal dose x-irradiation in rabbits)

(ETHYLAMINES, effects, mercaptoethylamine on leukocyte count after lethal dose x-irradiation in rabbits)

DIENSTBIER, Z.; SPANKOVA, H.; MLEJNKOVA, M.

Mechanism of modifications of the picture of leukocytes following administration of the lethal dose of roentgen rays. I. Effect of adrenalectomy; studies on neurohumoral regulation of the picture of leukocytes. Cesk. fysiolo. 4 no.2:195-199 May 55.

1. 1. klinika chorob vnitřnich K.U., Praha. Statistické zpracování: Mr. mat. V. Maly, Ústav pro organizaci zdravotnictví. Praha.

(LEUKOCYTE COUNT, effect of radiations on, x-ray, lethal dose, in adrenalectomized animals)

(ROENTGEN RAYS, effects, on leukocyte count, lethal dose in adrenalectomized animals)

(ADRENAL GLANDS, effect of excision, on leukocyte count response to lethal dose of x-rays)

HERMANSKY, F.; PUDLAK, P.; DIENSTBIER, Zd.

Effect of adrenalectomy and splenectomy on leukocytes following administration of narcotic dose of urethane in rats. IV. Neurohumoral regulation of leukocytes. Chekh. fiziol. 4 no.4: 424-429 1955.

1. I. Interne Klinik, Prag. Statistische Verarbeitung: Mag. mat. VI. Maly Institut fur Organisation des Gesundheitswesens, Prag.

- (ADRENAL GLANDS, effect of excision,
on leukocyte count in urethane anesth. in rats)
- (SPLEEN, effect of excision,
on leukocyte count in urethane anesth. in rats)
- (URETHANE, anesthesia and analgesia,
eff. on leukocyte count response to adrenalectomy &
splenectomy)
- (LEUKOCYTE COUNT,
eff. of adrenalectomy & splenectomy in urethane anesth.)
- (ANESTHESIA,
urethane, eff. on leukocyte count, response to
adrenalectomy & splenectomy)

PUDLAK, P.; HERMANŠKY, F.; DIENSTBIER, ZD.

Evaluation of leukocytic reaction in rats following administration of narcotic dose of urethane. Cech. fziol. 4 no.4:430-437 1955.

1. Interne Klinik, Prag. Statistische Verarbeitung: Mag. mat. V. Maly. Institut fur Organisation des Gesundheitswesens, Prag.

(URETHANE, anesthesia and analgesia,

eff. on leukocyte count responses to various experiments)

(LEUKOCYTE COUNT,

eff. of urethane anesth. on responses to various experiments)

(ANESTHESIA,

urethane, eff. on leukocyte count responses to various experiments)

HERMANSKY, F.; PODLAK, P.; DIENSTBIER, Z.

Effect of adrenalectomy and splenectomy on leukocytic changes following narcotic dose of urethane in rats. IV. Neurohumoral regulation of leukocyte count. Cesk. fysiол. 4 no.4:455-459
22 Oct 55.

1. Interni klinika lek. fak. KU, Praha Statisticke zpracovani
MGMat. V. Maly, Ustav pro organisaci zdravotnictvi, Praha.

(ADRENAL GLAND, effect of excision,

leukocyte count in urethane anesth.)

(SPLEEN, effect of excision,

on leukocyte count in urethane anesth.)

(URETHANE, anesthesia and analgesia,

eff. on leukocyte count, eff. of adrenalectomy &
splenectomy on reactivity)

(LEUKOCYTE COUNT,

eff. of adrenalectomy & splenectomy in urethane anesth.)

PUDLAK, P.; HERMANSKY, F.; DIENSTBIER, Z.

Experience with blocking of leukocytic reaction in rats following narcotic dose of urethane. V. Neurohumoral regulation of leukocyte count. Cesk. fysiол. 4 no.4:460-466 22 Oct 55.

1. I. interni klinika lek. fak. KU, Praha. Statisticke zpravovani MgMat, V. Maly, Ustav pro organisaci zdravotnictvy, Praha.

- (LEUKOCYTE COUNT,
eff. of hypophysectomy & heparin in urethane anesth.)
- (PITUITARY GLAND, effect of excision,
on leukocyte count in urethane anesth.)
- (URETHANE, anesthesia and analgesia,
eff. on leukocyte count, eff. of hypophysectomy
& heparin on reactivity.)
- (HEPARIN, effects,
on leukocyte count in urethane anesth.)

CZECHOSLOVAKIA/General Problems of Pathology. Tumors

U-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, No 32537

Author : Hermansky Frantisek, Possnerova Vera, Pudlak Pavel,
~~Dienstbier Zdenek~~, Sterbe Otakar.

Inst : ~~Not Given~~ ON NOSTRA

Title : The Influence of Preliminary Exposure and Splenectomy in the
Development of Transplanted Mouse Leukemia.

Orig Pub : Ceskosl. onkol., 1956, 3, No 4, 305-312

Abstract : Mice of the same line were administered intraperitoneally
with a six-week ♀ C57bl(78) per 0.1 ml of homogenate of leu-
kemic liver. They performed the splenectomy 4-6 days, exposure
(200 r) for 18-20 hours before the introduction of the homo-
gonate. Average continuation of life in the ♀ controls 18.45
days, during splenectomy 25.2 days, during exposure 15.45 days.
In mice exposed earlier than the others, a significant in-
crease of the general leukocyte count was observed, in spite
of the fact that after exposure leukopenic set in. Fifteen
days after transplantation, the number of leukocytes in them

Card : 1/2

CZECHOSLOVAKIA/General Problems of Pathology. Tumors

U-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, No 32537

comprised on the average 230 thousand in 1 mm³, with 87 thousand in the control. In those animals where splenectomy occurred, the number of leukocytes is higher (900 thousand) than in the controls. With the increase of the number of leukocytes in the blood of animals of all groups, many polymorphic lymphoblasts were observed. The average weight of the liver in relation to the general weight of the animal in the mice undergoing splenectomy was 12.5 g%, in those exposed 8, in the controls 9.943 g%. In the animals undergoing splenectomy, the increase of lymph nodes is more strongly expressed.

*IMI - KARLS-UNIVERSITÄT; MEDIZINISCHE KLINIK UND INSTITUT FÜR
HEMATOLOGIE UND BLUTTRANSFUSION, PRAGA, CZECHOSLOVAKIA.*

Card : 2/2

CZECHOSLOVAKIA / Human and Animal Physiology (Normal and Pathological). Effects of Physical Factors. T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60914

Author : Raskova, H.; Skrobal, D.; Dienstbier, Z.

Inst : Not given

Title : The Antitoxic Effect of the ATP

Orig Pub : Ceskosl. fysiolog., 1956, 5, No 4, 456-459

Abstract : ATP was used for the treatment of radiation sickness, produced in mice by irradiation with 400 - 800 r. doses. A single intravenous injection of 5 mg./kg. of ATP on the 5th day after irradiation did not reduce the mortality of the animals. A single or double injection of the same dose on the 5 - 26th day after the irradiation lowered the mortality only with higher doses of irradiation. It is thought that the lowering of the ATP level in the blood and the rise in the level of the ATP-ase in radiation

Card 1/2

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CZECHOSLOVAKIA / Human and Animal Physiology (Normal and Pathological). Effects of Physical Factors. T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60914

sickness occurs at the time of the highest mortality rate of the animals; an earlier administration of ATP in the absence of its lowering in the blood leads to an excess of it, which can only produce an unfavorable effect.
-- I. A. Frolova

Card 2/2

DIENSTBIER, Z.

EXCERPTA MEDICA Sec.14 Vol.11/9 Radiology Sept 57.

1538. DIENSTBIER Z., ČÁMSKÝ J. and KOFRÁNEK V. I. Interni Klín. a Ústavu Letecké Fysiol., Praha. *Vliv narkotik a anestetik na hynutí zvířat po letálním ozáření rentgenovými paprsky. The influence of narcotics and anaesthetics on the mortality of animals after a lethal dose of X-radiation ČAS. LÉK. ČES. 1956, 95/32 (889-894) Graphs 2

A survey is given of work dealing with the sensitivity of the nervous system to X-rays. The conception of the functional and morphological sensitivity of the nervous system is accepted. In the experimental section, the possibility of decreasing the mortality of young laboratory rats irradiated with lethal doses by the administration of narcotics or substances with an anaesthetic action (dial, dormiral, pentothal, ether, urethane, procaine, ethanol) was investigated. No obvious action against the effects of X-ray irradiation was noted in any of these substances. The conclusions drawn by other authors who showed that some of these substances have a blocking action on irradiated animals are described. The reasons for the conflicting results are discussed. It is shown that it is necessary to consider the organism as a whole. The influence of the nervous system in irradiation sickness requires further study since contemporary knowledge on this subject is inadequate.

BOJARKNY, J.; DIENSTBIER, Z.

Study of radiophosphorus ^{32}P levels in rats after a single
2,3-dinitrophenol administration prior to X-irradiation with
the dose of 600 r. Neoplasma (Bratisl.) 12 no.5:525-530 '65.

1. Institute of Biophysics, Faculty of General Medicine, Charles
University, Prague, Czechoslovakia. Submitted November 4, 1964.

1 5242-66 EWT(m)

ACC NR: AP6006048

SOURCE CODE: CZ/0053/65/014/004/0297/0297

AUTHOR: Jelinek, J. M.; Dienstbier, Z.; Hava, M.

26 B

ORG: Research Institute for Natural Medicinal Substances, Prague (Vyzkumny ustav prirodnich leziv); Biophysics Institute, Medical Faculty, Charles University, Prague (Biofyzikalni ustav lek. fak. UK)

TITLE: Effect of 19-nortestosterone phenylpropionate on the ¹⁹postirradiation syndrome and some stressful conditions in mice [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 29 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 297

TOPIC TAGS: mouse, endocrinology, radiation biologic effect, gland drug

ABSTRACT: 19-Nortestosterone phenylpropionate significantly lowered the survival of mice following 600 r irradiation under certain conditions; it did not have a nonspecific protective effect as found for methandrostenolone; no interaction with glucocorticoids. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUBM DATE: none / OTH REF: 001

Card 1/1

DIENSTBIER, Zdenek

Nemoc z ozareni se zvlastnim zretelem ke krevnim zmenam. (Radiation Sickness with Special Regard to the Blood Changes. illus., bibl., indexes) Authors: Z. Dienstbier, M. Arient, Vl. Kofransk. Introduction by M. Netousek. Prague, SZdN, 1957, 264 p.

Fourteen chapters of radiobiological studies explaining numerous theoretical, experimental, clinical, and general problems. The first nine chapters are an introduction to the problem of radiation sickness, chronic damages caused by radiation, blood changes, malignant diseases of the blood-forming organs, genetic consequences, and the therapy of radiation sickness. The (the chapters) constitute a basis for the following clinical part of the monograph.

Bibliograficky katalog, CSR, Ceske knihy, No. 30. 3 Sept 57. p. 649-50.

COUNTRY : CZECHOSLOVAKIA
CATEGORY : General Problems of Pathology. Tumors. Experimental Therapy
ABS. JOUR. : RZBiol., No. 12 1958, No. 56397
AUTHOR : Netousck, M., Dienstbier, Z., Pstruzinova, H.
TITL. : -
TITLE : Certain Antibiotics in the Treatment of Tumors
ORIG. PUB. : Vnitřni Lekarstvi, 1957, Vol.3, No.6, 542-547
ABSTRACT : Intravenous injections of sarcomycin (S) in doses gradually increasing from 300 mg to 1-5 gm per day, caused a transitory subjective improvement in only 3 of 14 patients with inoperable tumors at different sites and of different histologic structure. Laboratory and X-ray findings did not change under the influence of treatment. In 3 cases there were severe side effects: febrile reactions, obtundation of consciousness, hallucinations, and collapse. -- L.A. Ven'shikova
CARD: 1/1

~~DIENSTBIER, Zdenek, MUDr.~~; ARIENT, Miloslav, MUDr.; KOFRANEK, Vladimir, MUDr.

No translation. Neoplasma, Bratisl. 4 no.1:15-20 1957.

1. I. Clinic of Internal Medicine, Charles University, Praha
Central Laboratory, Military Hospital, Praha Department of
Oncology, District Hospital, Usti nad Labem. 2. Authors'
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(LEUKOCYTES, eff. of radiations on
x-irradiation of various parts of body in rats)
(ROENTGEN RAYS, eff.
irradiation of various parts of body on leukocytes
in rats)

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(ROENTGEN RAYS, effects,

lethal dose on leukocyte count, eff. of tissue homogenates in rats (Cz))

(LEUKOCYTE COUNT, effect of radiations,

x-ray lethal dose, eff. of tissue homogenates in rats (Cz))

(TISSUE EXTRACTS, effects,

on-leukocyte count after lethal x-irradiation in rats (Cz))

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 bibliog. (Cz))

(ISOTOPIES,

 bibliog. (Cz))

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(PHOSPHORUS radioactive)
(BLOOD CELLS radiation eff.)

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1. Technicka spoluprace M. Stachova, R. Papezova, M. Cernovska,
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doc. MUDr. Z. Dienstbier.
(DEHYDROGENASES metab.)
(RADIATION EFFECTS exper.)

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1. Biofyzikalni ustav lekarske fakulty KU v Praze, Vojensky ustav
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(LEUKOCYTES radiation eff.)

89375

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A201/A026

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AUTHORS: Vitek, František; Dienstbier, Zdeněk

TITLE: An Exponential Model of Biological Excretion of Radioisotopes and Its Application to the Calculation of the Absorbed Radiation Dose

PERIODICAL: Jaderná energie, 1960, No. 11, pp. 383 - 385

TEXT: C.G. Stewart (Ref. 2) proposed a model for the determination of the absorbed radiation dose from an injected radioisotope. The authors of this article have improved this model to make it correspond more closely to the physiological assumptions. The schematic diagram of the Stewart model is shown in Figure 1, that of the improved Vitek-Dienstbier model is shown in Figure 2. In this latter model, the isotope with a physical decay constant λ_0 is excreted from the organism at the speed of λ_1 , transits from the system I (blood + body organs without the critical organ) into the system II (critical organ) at the speed of λ_2 , and is returned to the blood at the speed of λ_3 . The activity change with time $A_1(t)$ in the system I can be expressed by the equation

$$\frac{d A_1(t)}{dt} = - (\lambda_0 + \lambda_1 + \lambda_2) A_1(t) + \lambda_3 A_2(t) \quad (9)$$

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and the activity change with time in the critical organ II $A_2(t)$ can be expressed by the equation

$$\frac{d A_2(t)}{dt} = \lambda_2 A_1(t) - (\lambda_0 + \lambda_3) A_2(t) \quad (10)$$

By solving the system of differential equations (9), (10) we receive

$$A_1(t) = A_0 \frac{\lambda_3 - \lambda_1 - \lambda_2 + \gamma}{2\gamma} e^{-\frac{1}{2}[-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma]t} + \left(1 - \frac{\lambda_3 - \lambda_1 - \lambda_2 + \gamma}{2\gamma}\right) e^{-\frac{1}{2}[(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) - \gamma]t} \quad (11)$$

$$\gamma = \sqrt{(\lambda_1 + \lambda_2 + \lambda_3)^2 - 4\lambda_1\lambda_2} \quad (12)$$

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$$A_2(t) = A_0 \frac{\lambda_2}{\gamma} \left\{ e^{-\frac{1}{2} [- (2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma] t} - e^{-\frac{1}{2} [- (2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) - \gamma] t} \right\} \quad (13)$$

Finding the maximum of the function $A_2(t)$ we can determine the time t_{max} in which the isotope concentration in the critical organ will reach its maximum. From the equation (13) we receive

$$t_{max} = \frac{1}{\gamma} \ln \frac{2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3 + \gamma}{2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3 - \gamma} \quad (14)$$

The excretion speed is given by the equation

$$Y(t) = \lambda_1 A_1(t) \quad (15)$$

Using the equation (11) we receive

$$Y(t) = A_0 \frac{\lambda_1 (\lambda_3 - \lambda_1 - \lambda_2 + \gamma)}{2\gamma} e^{-\frac{1}{2} [- (2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma] t} + A_0 \lambda_1 \left(1 - \frac{\lambda_3 - \lambda_1 - \lambda_2 + \gamma}{2\gamma} \right) e^{-\frac{1}{2} [- (2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) - \gamma] t} \quad (16)$$

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The average isotope concentration $C_2(t)$ in the critical organ of a mass m_2 grams, and an activity $A_2(t)$ expressed in μc , is

$$C_2(t) = \frac{A_2(t)}{m_2} (\mu c/\text{gram}) \tag{17}$$

The average isotope concentration in the rest of the body of a total mass m grams is then

$$C_1(t) = \frac{A_1(t)}{m - m_2} \tag{18}$$

In the following only β -emitters are considered. The average concentration $C(\mu c/\text{gram})$ corresponds to $3.7 \cdot 10^4 \cdot C$ (decay/sec \cdot gram). The mean β -radiation energy is \bar{E}_β (Mev) = $1.6 \cdot 10^{-6} \cdot E_\beta$ (erg). The unit of the absorbed radiation dose (1 rad) corresponds to the absorption of 100 erg/gram. Provided that the dimensions of the critical organ are larger than the β -particle range in that organ, we can calculate the absorbed radiation dose in the critical organ in time t^* from the equation

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$$D_{\beta 2}(t^*) = K \int_0^{t^*} c_2(t) dt \text{ (rad)} \quad (19)$$

$$K = 3.7 \cdot 10^4 \cdot 1.6 \cdot 10^{-6} \cdot 10^{-2} \cdot 3,600 \cdot 24 E = 51.2 E \text{ (rad/den)} \quad (20)$$

Substituting from (13), (17) into (19), and integrating, we receive

$$D_{\beta 2}(t^*) = \frac{51.2}{m_2} \cdot \frac{2 A_0 \lambda_2 E_{\beta}}{\gamma^2} \left\{ - \frac{\gamma}{2 [\lambda_0 (\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \lambda_1 \lambda_3]} + \right. \\ \left. + \frac{1}{2 \lambda_0 + \lambda_1 + \lambda_2 + \lambda_3 + \gamma} e^{-\frac{1}{2} [- (2 \lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) - \gamma] t^*} + \right. \quad X$$

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$$+ \frac{1}{-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma} e^{-\frac{1}{2}[-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma]t^*} \text{ (rad)} \quad (21)$$

if $\lambda_0, \lambda_1, \lambda_2, \lambda_3$, are expressed in days⁻¹, A_0 in μc , and t^* in days. By analogy, the absorbed radiation dose in the rest of the body is given by

$$D_{\beta 1}(t^*) = \int_0^{t^*} KC_1(t) dt \quad (22)$$

By substitution from equation (11), (18) and integration, we receive

$$D_{\beta 1}(t^*) = \frac{51.2 \bar{E}_{\beta}}{m - m_2} A_0 \left\{ \frac{\lambda_0 + \lambda_3}{\lambda_0 (\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \lambda_1 \lambda_3} + \right.$$

$$\left. + \frac{\lambda_3 - \lambda_1 - \lambda_2 + \gamma}{\gamma[-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma]} e^{-\frac{1}{2}[-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) + \gamma]t^*} + \right.$$

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$$+ \frac{\lambda_3 - \lambda_1 - \lambda_2 - \gamma}{\gamma(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3 + \gamma)} e^{-\frac{1}{2} [-(2\lambda_0 + \lambda_1 + \lambda_2 + \lambda_3) - \gamma]t^*} \} \text{ (rad) (23)}$$

The value of the effective half-life of the radioisotope for the whole body can be determined from the equation

$$T_{ef} \text{ (whole body)} = \frac{\ln 2}{\lambda_0 + \lambda_1} \quad (24)$$

The value of the constants $\lambda_1, \lambda_2, \lambda_3$, can be obtained by the comparison of the equation (16) with the excretion equation which is derived from experiments. When comparing the results obtained according to the Steward model with those obtained according to the new model, it is seen that there is no substantial difference between them. The new model was verified by the following experiments: Six rats of the Wistar-Bioveta family were injected $25 \mu\text{c}$ P-32 in the form of Na_2HPO_4 in isotonic solution. Excretion by both stool and urine was measured always during 24 hours. The average excretion values are shown in Figure 3. The curve of the excreted activity can be expressed by the equation

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$$Y(t) = 2.75 e^{-0.69492 t} + 0.15 e^{-0.05285 t} \quad (29)$$

By comparison of the equation (29) and the equation (16) the constants were established as follows: $\lambda_1 = 0.07548 \text{ day}^{-1}$; $\lambda_2 = 0.53777 \text{ day}^{-1}$; $\lambda_3 = 0.03760 \text{ day}^{-1}$. The physical decay constant of P-32 $\lambda_0 = 0.04846 \text{ day}^{-1}$. The time in which the phosphor concentration in the critical organ reaches its maximum value t_{max} , measured from the moment of the injection, is 4 days according to the equation (14). The activity in the bones of the rats was measured after the injection of $25 \mu\text{c}$ P-32 (Fig. 4) and $5 \mu\text{c}$ P-32 (Fig. 5). The measurement results were compared to the activity values calculated according to equation (13), assuming that the skeleton weight represents 10% of the total body weight (curve 2, Figure 4 and 5). The theoretically determined results were compared with the experimental ones and a fair agreement was found in the determination of the time in which the P-32 concentration in the skeleton reaches its maximum, and in the incorporated quantity of the isotope in the critical organ. This makes it possible to determine

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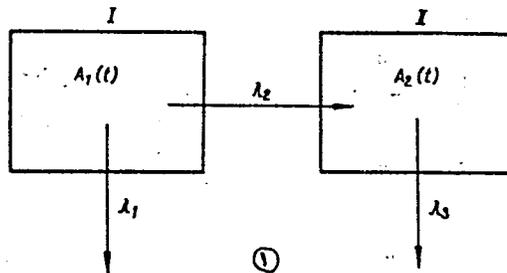
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A201/A026

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the absorbed radiation dose on the grounds of the excreted quantity of the radioisotope. However, the method is not quite accurate mainly due to the difficulties in the precise determination of the excreted activity, and to the subjective errors which may occur in the determination of the equation for the excretion speed. The method will be further tested using other radioisotopes.

ASSOCIATION: Biofyzikální ústav lékařské fakulty KU (Biophysical Institute, Medical Department, KU)

Figure 1: Schematic diagram of the Stewart model; I - whole body without the critical organ, II - critical organ



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Figure 2: Schematic diagram of the Vitek-Dienstbier model; I - whole body without the critical organ, II - critical organ

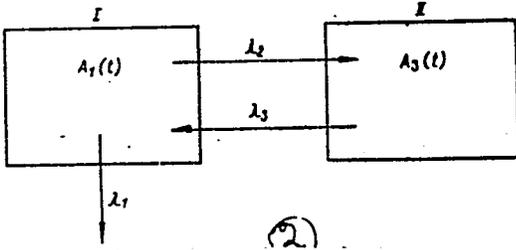
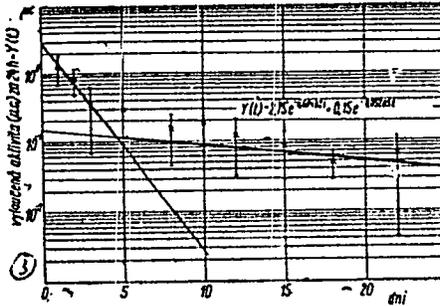


Figure 3: The excreted P-32 activity (A_c) after the injection of 25 μ Ci P-32 in rats. (Text along the axis of ordinates) excreted activity (A_c) in 24 h = $Y(t)$. (Text along the axis of abscissas) days



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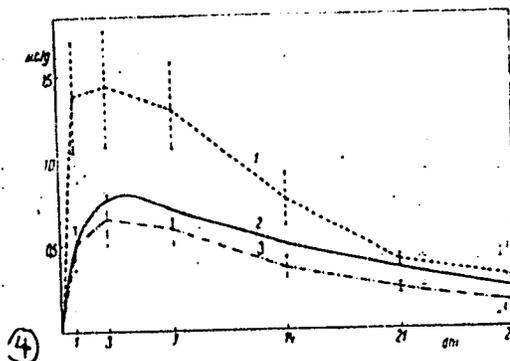
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Figure 4: Average P-32 concentration ($\mu\text{c}/\text{gram}$) after the intravenous administration of $25 \mu\text{c}$ P-32 in bones of rats, in dependence on the time elapsed since the administration. Curve 1 = bone ash; 2 = calculated concentration; 3 = bone



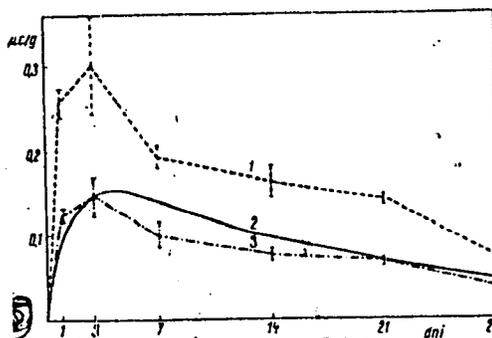
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Figure 5: Average P-32 concentration ($\mu\text{C/g}$) after the intravenous administration of 5 μC P-32 in the bones of rats in dependence on the time elapsed since the administration. Curve 1 - bone ash; 2 - calculated concentration; 3 - bone



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(MIRA 13:12)

(DEOXYCYTIDINE)

(RADIATION SICKNESS)

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O.Klimes

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1. Ustav hematologie a krevni transfuze, prednosta prof. dr.
J.Horejsi, I. interni klinika lekarske fakulty KU, prednosta
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prednosta doc. dr. Zd. Dienstbier, Praha.

(BLOOD PRESERVATION)

(RADIATION EFFECTS exper.)

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1. I. Medical Clinic, Faculty of General Medicine, Biophysical
Institute of the Faculty of General Medicine, Charles University,
Prague, Czechoslovakia.

(RADIATION INJURY blood)

(TRANSAMINASES blood)

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30

6. Topographo-epidemiologic field data often on an epidemic virus hepatitis. Also, specific studies on the epidemiology of infectious diseases (prevalence, incidence, distribution) and laboratory studies (serology, pathology, immunology, bacteriology, virology, and histology) (see also: "Epidemiology of Infectious Diseases" (London: Taylor & Francis, 1975), pp. 17-20).

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3/8

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1. Third Medical Clinic, Laboratory for Endocrinology and Metabolism,
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versity, Prague.

(POLYURIA exper) (RADIATION EFFECTS exper)
(PITUITARY GLAND POSTERIOR physiol)

RAKOVIC, M.; DIENSTBIER, Z.

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1. Institute of Biophysics, Faculty of General Medicine, Charles University, Prague.
(RADIATION INJURY blood) (BLOOD radiation eff)

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1. Biofyzikalni ustav fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta doc. MUDr. Z. Dienstbier. Veterinarni vyzkumne stredisko v Praze.

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(METHIONINE rel cpds)

VOLEK, V.; ~~DIENSTBIER, Z.~~; technicka spoluprace: STACHOVA, M.; PAPEZOVA, R.;
CERNOVSKA, M.; LOJKOVA, M.

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1. I. interni klinika fakulty vseobecneho lekarstvi University Karlovy
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(LACTIC DEHYDROGENASE blood) (RADIATION INJURY exper)

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1. III interni ~~klinika~~ KU v Praze, prednosta akademik J. Charvat.
Biofyzikalni ustav KU v Praze, prednosta doc. dr. Z. Dienstbier.

(HYPERTHYROIDISM diag) (IODINE radioactive)

DIENSTBIER, Zd.; VITEK, F.; technicka spoluprace STACHOVA, M.; JIROUNEK, P.
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Karlovy v Praze, prednosta doc. dr. Zd. Dienstbier.
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1. Institute of Haematology, and Blood Transfusion and Institute of
Biophysics, Medical Faculty, Charles University, Prague.
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v Praz, prednosta doc. dr. Zd. Dienstbier.

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(PHOSPHORUS chemistry)

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1. Institute of Biophysics, Faculty of General Medicine, Charles University, Prague, CSSR.

(PHOSPHORUS ISOTOPES) (RADIATION EFFECTS)
(METABOLISM) (URINE) (STARVATION)
(BURNS) (DINITROPHENOLS)

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Biophysical Institute of the Faculty of General Medicine
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obecneho lekarstvi KU), Prague

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whole-body irradiation with X-rays. Neoplasma 10 no.5:
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Charles University, Prague, CSSR.

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University, Prague.

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of Charles University (Biophysikální ústav Faculty
všeobecného lékařství Univerzity Karlovy), Prague (for
both)

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DIENSTBIER, Z.

"Effects of ionizing radiation on the digestive system" by
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1361 N '64.

SONKA, J.; HONESL, J.; MENSTL, Z.

Pentose cycle and radiation injury. Ces. lek. zpr. 103 no.48:
1343-1344 N 27 1968.

1. laborator pro endokrinologii a metabolismus fakulty všeobecného
lékarství Karlovy University v Praze, (vedoucí akademik J. Honzl)
a Biofyzikální ústav fakulty všeobecného lékařství Karlovy univer-
sity v Praze (prednosta doc. dr. Z. Menstl).

TRUSTY, vojtech; DIENSTBIER, Zdenek

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1. Katedra dialektického a historického materializmu fakulty
vseobecneho lekarstvi University Karlovy v Praze (vedouci
RSDr. J.Pranosil, CSc.) a Katedra lekarske fyziky a nuklearni
mediciny fakulty vseobecneho lekarstvi University Karlovy v
Praze (vedouci doc. MUDr. Z.Dienst bier, DrSc.)

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SETKA, J.

Isotope examination of the portal circulation. Acta univ. Carol.
[med] (Praha): Suppl. 18: 47-48 '64.

1. Biofyzikalni ustav fakulty vseobecneho lekarstvi University
Karlovy v Praze (prednosta: doc. dr. Z. Dienstbier); II. chirurgick-
gicka klinika fakulty vseobecneho lekarstvi University Karlovy
v Praze (prednosta: prof. dr. J. Lhotka); III. detska klinika
fakulty vseobecneho lekarstvi University Karlovy v Praze (pred-
nosta: prof. dr. O. Vyhytil); a II. interni klinika fakulty
vseobecneho lekarstvi University Karlovy v Praze (prednosta:
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DIENSTBIER, Z., doc. dr., DrSc.; VITEK, F.

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Isotope methods in the examination of the portal circulation.
Cas. lek. cesk. 104 no.10:257-262 12 Mr '65.

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Diagnostic examination of the thyroid gland with the use of isotopes. *Gas. lek. cesk.* 104 no.15:65-69 16 Ap'65.

1. Katedra lékařské fyziky a nukleární medicíny fakulty všeobecného lékařství Karlovy University v Praze (vedoucí: doc. dr. Z. Dienstbier, DrSc.).

DIENSTBIER, Zdenek

New metabolic and hematologic aspects in pathophysiology of
the post-irradiation changes. Acta Univ. Carol. [med.] (Praha)
11 no.1:3-37 '65.

1. Biophysical Institute, Faculty of General Medicine, Charles
University, Prague (Head Prof. MUDr. Z. Dienstbier, DrSc.).

CZECHOSLOVAKIA

UDC 616-001.26/.28-089.5-085.781-092.23

POKORNY, Jiri; Department of Anesthesiology, Central Military Hospital (Anesteziologicke Oddeleni Ustredni Vojenske Nemocnice), Prague; Docent Dr POSPISIL, Jan; Biophysical Institute, Faculty of Veterinary Medicine, Charles University (Biofyzikalni Ustav FVL KU), Prague, Head (Prednosta) Prof Dr Zdenek DIENSTBIER, Veterinary Research Center (Vetrinarni Vyzkumne Stredisko), Prague.

"Experimentally Proved Changes of Toxicity of Some Drugs Used in Anesthesiology Resulting from Acute Irradiation Sickness."

Prague, Vojenske Zdravotnicke Listy, Vol 35, No 2, Apr 66, pp 50 - 55

Abstract: 14 substances of Czechoslovak manufacture were studied in experiments on mice. Some animals react differently from others to a given drug, and only 95% reliability of the results could be obtained. Chlorpromazine and mesocaine are quite toxic to irradiated organisms; atropine can be used in a normal way, while pethidin should be used in doses reduced by 25-30%. Thio-pental is suitable even during acute irradiation sickness. Gallamine, decamethonium, and succinylcholine may be used after irradiation, tubocurarine becomes toxic. 8 Figures, 2 Tables, no references.

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CZECHOSLOVAKIA

GRAF, M.; HLAVATY, V.; 1st Clinic for Gynecology, Faculty of General Medicine, Charles University (I. Gynekologicko-Porodnicka Klinika Fak. Vseob. Lek. KU), Prague, head (Prodnosta) Prof Dr K. KLAUS; Biophysical Institute, Faculty of General Medicine Charles University (Biofyzikalni Ustav Fak. Vseob. Lek. KU), Prague, head (Prodnosta) Prof Dr Z. DIENSTBIER.

"Isotope Placentography."

Prague, Casopis Lekarů Ceských, Vol 105, No 19, 13 May 66, Lokarska Veda v Zahranici, No 5, pp 89 - 93

Abstract: Iodine 131 is the best suited isotope for the purpose. It is bound with human serum albumin, and the thyroid gland of the foetus is protected from this iodine by the administration of inorganic iodine, which blocks it before I^{131} is administered. Good results are also obtained with human serum albumin tagged with Cr^{51} , or with erythrocytes tagged with Cr^{51} . Cr has the advantage that it is not accumulated by a particular human organ. Scintillation counters are used in the determination of the amounts of the isotope. The method is safer than mechanical examination. 2 Figures, 2 Tables, 50 Western, 4 Czech references.

1/1

(Ms. received 11 66)

Pharmacology and Toxicology

CZECHOSLOVAKIA

UDC 615.776.83

POSPISIL, J.; DIENSTBIER, Z.; KOTATKO, J.; Biophysical Institute,
Faculty of General Medicine, Charles University (Biofyzikalni
Ustav Fakulty Vseobecneho Lekarstvi KU), Prague, Head (Prednosta)
Prof Dr Z. DIENSTBIER.

"Application of the Radioprotective Substance Aminoethylisothio-
urea Br IBr (AET)."

Prague, Casopis Lekarů Ceskych, Vol 105, No 43, 28 Oct 66, pp
1165 - 1171

Abstract /Authors' English summary modified_7: Betaaminoisothio-
urea (AET) of Czech and USA origin was administered to mice, rats,
and dogs, and its effect investigated. The effect of the two
substances is basically similar, and there is no great difference
in their toxicity. AET administration before irradiation is not
effective; its toxicity is too high for use in treatment of human
beings. 2 Figures, 5 Tables, 28 Western, 3 Czech, 2 Russian ref-
erences. (Manuscript received Oct 65).
1/1

Nuclear Medicine

CZECHOSLOVAKIA

UDC 612.111/.112.014.18-084

KOFRANEK, V.; POSPISIL, J.; DIENSTBIER, Z.; ARIENT, K.; Research Institute of Radiation Hygiene (Vyzkumny Ustav Hygieny Zareni), Prague; Biophysical Institute, Faculty of General Medicine, Charles University (Biofysikalni Ustav Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr Z. DIENSTBIER; Department of Clinical Laboratories at the Central Military Hospital (Oddeleni Klinikychn Laboratori Ustredni Vojenske Nemocnice), Prague.

"Dynamics of Peripheral Blood Changes in Relation to Combined External Radiation and the Activation of Na²⁴ in Rats. I. "

Prague, Casopis Lekarů Ceskych, Vol 106, No 8, 24 Feb 67, pp 201 - 210

Abstract /Authors' English summary modified 7: Dynamics of peripheral changes of leucocytes, neutrophils, and lymphocytes in rats were investigated for 24 hours to 29 days following an irradiation by 25, 100, 600, and 1000 R of ionizing radiation from various sources. Lymphocytes are the cells most sensitive to irradiation. From the change in their numbers it is possible to determine what amount and what kind of irradiation (X-ray, gamma, neutrons) was applied. 6 Figures. 2 tables.

LUKES, R.[deceased]; DIENSTBIEROVA, V.; KOVAR, J.; BLAHA, K.

Configuration of nitrogen-containing compounds. XII. Configuration of
(-)-halostachine. Coll Cz chem 26 no.2:466-470 F '61.
(REAI 10:9)

1. Laboratorium fur heterocyclische Verbindungen, Tschechoslowakische
Akademie der Wissenschaften, Prag.

(Methylaminomethylbenzyl alcohol)
(Nitrogen)

6-11-AST-DI-ROVA

Synthesis of 5-methylfurfural. R. Lukeš and V. Dierke-
 bierová (Vysoká škola chem., Prague, Czech.). *Chem.
 Listy* 48, 280-1(1954). 5-Methylfurfural (I) was obtained
 by the Stephen reduction of 5-methylpyromuconitrile (II),
 prepd. from furfuryl chloride (III). To 50 ml. Et₂O, 50 ml.
 petr. ether, and 62 g. SOCl₂, cooled to -5° was added, in
 the course of 4 hrs., a cooled mixt. of 45 g. C₂H₅N, 46 g. fur-
 furyl alc. (b_p 66°), and 50 ml. Et₂O; acidifying the mixt.
 with dil. HCl (1:1), washing the ether layer with 50 ml. 10%
 KOH, and distg. yielded 24 g. (44%) III, b_p 53-3.5°. II,
 b_p 88-70°, was prepd. according to Reichstein (*C.A.* 74,
 3507) in 84% yield. To 94.5 g. anhyd. SnCl₄ in 350 ml.
 Et₂O satd. with HCl was added, in the course of 1 hr., 26.8
 g. II, the mixt. stirred 1 hr., allowed to stand 1 week at room
 temp., and the ppt. filtered (134 g.), treated with 660 ml.
 satd. AcONa, and steam distd.; extn. of the distillate with
 Et₂O yielded 5.3 g. (20.9%) I, b_p 81-2°. 5-Methyl-
 furanacrylic acid, prepd. from I, m. 153-4° (from H₂O).
 M. Hudlický

7A
MST

COUNTRY : [unclear]
CATEGORY : [unclear]
ABS. JOUR. : RZKhim., No. 1959, No. 860
AUTHOR : Lemes, R.; Dierstl'ova, V.; Cervinka, G.
INST. : [unclear]
TITLE : On the reaction of Grignard reagent with
derivatives of 1-ethyl-2-alkyl-
Pyrroline
ORIG. PUB. : Collect. Czechoslov. Chem. Commun., 1951, 16,
No. 1, 428-436
ABSTRACT : See RZKhim., 1959, No. 860.

CARD:

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TUCEK, S.; DIEPOLD, F.

The metabolism of acetylcholine in the brain in experimental hyperthyroidism. *Physiol. bohemoslov.* 12 no.3:258-262 '63.

1. Institute of Physiology, Faculty of Medicine, Charles University, Plzen.

(ACETYLCHOLINE) (BRAIN) (CEREBRAL CORTEX)
(BRAIN STEM) (MEDULLA OBLONGATA)
(GANGLIA, BASAL) (METABOLISM)
(THYROID HORMONES) (HYPERTHYROIDISM)
(CHOLINESTERASE)